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EXAMINER

THIRUGNANAM, GANDHI

ART UNIT	PAPER NUMBER
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2624

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ELECTRONIC

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Advisory Action

In Regards to the 35 USC 112 1st Paragraph New Matter Rejection

Page 19 paragraph 5 explains the generation of the motion blurred foreground more clearly, which states "The motion blurring adjustment section 44 mitigates motion blurring contained in the foreground component image data DBe based on the foreground component image supplied from the foreground/background separation section 43, the motion vector MVC supplied from the motion vector detection section 30 and its region information AR, and the adjustment-processing unit. It supplies this motion-blurring-mitigated foreground component image data DBf to the output section 50. "

From this we see that the motion blurring adjustment section(Fig. 7) mitigates motion blurring of the foreground component image based upon a the foreground image, the motion vector (MVC) and region information (AR) forming a motion mitigated foreground image. This motion mitigated foreground image is sent to the output section. This is also explained later in the Disclosure for example page 36 paragraph 1

Page 16 paragraph 2 explains the output section. The output section (Fig. 5) receives DBb (background component image data), DBf (Motion-blurring mitigated object image) and HZ (mix region) and outputs DVout (image data of the motion-blurring mitigated image)

"The output section 50 combines an image of foreground region in which motion blurring based on the foreground component image data DBf onto a background image based on the background component image data DBb, thereby generating image data DVout of the motion-blurring-mitigated image and outputting it. In this case, the foreground region image, which is the motion-blurring-mitigated object image, can be combined into a space-time position that corresponds to the detected motion vector MVC, to output a motion-blurring-mitigated object image of the moving object to a position that tracks the moving object."

This appears to state the output section combines the motion-blurring mitigated object image and the background component image to generate the output image. Then the motion-blurring mitigate object is placed into a space-time position which corresponds to the motion vector to output **a motion-blurring mitigated object image**. Note that this is a singular image. As the Examiner understands it the space-time position is used since the motion-blurring-mitigated object is based upon a motion-vector, the blurred object may not necessarily be place in the exact location as it was previously.

Page 16 Paragraph 2 further states

"That is, when the motion vector is detected using at least first and second images that occur successively in time, a motion-blurring-mitigated object image of the moving object is combined into a position of a target pixel in an image or a position that

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corresponds to a target pixel in the other image, both positions of which correspond to this detected motion vector."

This statement further reinforces the part above. The motion-blurring-mitigated object is combined into a position of a target pixel in **an image** or a position that corresponds to a target pixel in **the other image**. This further reinforces that the motion-blurring mitigated object is combined into a single image.

Page 40 paragraph 4- page 41 paragraph 1 (corresponds to Fig. 18) states "At step ST8, the CPU61 decides whether the motion-blurring-mitigation processing should be ended. If, in this case, the motion-blurring-mitigation processing is to be performed on an image of the next frame, the process returns to step ST2 and, otherwise, ends the processing. It is thus possible to perform the motion blurring mitigation processing also by using software." As can be seen here the method disclosed processes one image frame at a time.

In regards to Applicant's argument on page 2 paragraph 5 - page 3 paragraph 2. The Examiner agrees with Applicant's reading of the disclosure. The output section combines an image of foreground region in which motion blurring based on the foreground component image data DBf onto a background image based on **the background component** image data DBb, thereby generating image data DVout and outputting it. It should be noted that the blur mitigated image is added to a single image

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to form a single output of DVout. This does not show combining the blur mitigated object image into each of the multiple images

In regards to Applicant's argument on page 3 paragraph 3 to page 4 paragraph 1. The Examiner disagrees with Applicant's conclusion that "the motion-blurring-mitigated object image of the moving object may be combined back into the image from which it was extracted as well as another image "occurring successively in time". The quoted text specifically says "moving object is combined into a position of a target pixel in an image or a position that corresponds to a target pixel in the other image". Note the word "or" which means one or the other, but not both. This can also be shown in for example Fig. 5, which shows only a single Dvout, not multiple images out.

In response to Applicant's argument on page 4 paragraph 2, Applicant states "as shown in Fig. 24 even when the moving object OBf moves in an order of Figs. 24A, 24B and 24C, motion blurring of this moving object OBf has been mitigated as tracking it {through each of the time sequence of images. (Not is the cited paragraph)}"

The Examiner disagrees that the "it" refers to the "motion-blurring mitigated object image". The "it" refers to the moving object OBf. The first instance of motion-blurring-mitigated moving object is after the word "it", so "it" must correspond to the moving object OBf.

The cited text does not disclose "combining the motion-blurring-mitigated object image ... into a space-time location in each of the multiple images..." The cited text shows it is possible to output an image as if the moving object OBf is being tracked.

In response to Applicant's argument that the "into each of the multiple images" is supported by the specification through express, implicit or inherent disclosure. The quoted text is clearly not expressly shown in the original disclosure. The Examiner does not believe that the limitation is "implicit or inherent" defined in the disclosure. The Examiner believes that "into an image" would be supported by the original disclosure.

It should be noted that if the limitation of "into each of the multiple images" were to be implicitly or inherently supported by the original disclosure. This would be also true for the primary reference Kondo (PGPub 2004/0021775), by the same inventors, which would turn the current rejection from a 103 to a 102 rejection. The secondary reference of Burt (Patent #5,557,684) would no longer be required.

Regarding Applicant's argument to the 35 USC 103 rejection, Applicant argues that Burt fails to teach into a "space-time location in each of the multiple images". Burt discloses combining the residuals into a static mosaic image, where the background mosaic comprises each of the multiple images stitched together. A mosaic is an image that contains a plurality of individual images. (Col. 1 Line 30-31)

As stated above if Applicant were correct that "into a space-time location in each of the multiple images" was implicitly or inherently disclosed then the Prior Art (Applicant's own invention) would also implicitly or inherently disclose this limitation.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to GANDHI THIRUGNANAM whose telephone number is (571)270-3261. The examiner can normally be reached on M-Th, 7:30am to 6pm, EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bhavesh M. Mehta can be reached on 571-272-7453. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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/Gandhi Thirugnanam/
Examiner, Art Unit 2624